REMARKS

The Office Action rejected Claim 24 under 35 U.S.C. § 103 as being unpatentable over *Elderling* (U.S. 6,615,039) in view of *Swix* (U.S. 6,718,551).

Elderling teaches a targeted advertising system in which advertisements are played based on subgroups containing the same subscriber characteristics. (Col. 2, lns. 6 – 15). A transmitter transmits a variety of programs together in a constant bit rate ("CBR") distribution data stream to a receiver. (Col. 9, ln. 61 – Col. 10, ln. 4). A receiver then receives the distribution data stream and the receiver selector uses a program map embedded within the distribution data stream to direct program and auxiliary data multiplexers to extract a selected primary program and selected portions of the auxiliary data stream. The video augmentation unit then inserts the selected auxiliary data into the primary program stream to create an augmented primary program. The auxiliary data comprises short program segments including both video and audio data. (Col. 10, lns. 57 – 67).

Elderling does not teach or suggest "allocating a second portion of the available bandwidth of the first time slot to a specific program having interactive content for a commercial, so that the second portion of the available bandwidth of the first time slot is narrower than the first portion of the available bandwidth of the first time slot, the first time slot being longer than a time period necessary for transmitting a program data of the specific program having interactive content for the commercial more than once during the second portion of the available bandwidth of the first time slot." There is no indication in *Elderling* that the time period in which the advertisement is downloaded in advance should be long enough such that the advertisement can be downloaded not only once, but more than once. There is also no indication that *Swix* remedies the deficiencies of *Elderling*.

In contrast, the present invention advantageously has a time period long enough such that a specific program can be downloaded more than once, which increases the probability that the specific program can be received and cached prior to the reproduction time. Furthermore, since the second portion is smaller than the first portion, a small amount of bandwidth is utilized and there is relatively small interference with the broadcast of other programs during the first time period.

Furthermore, *Elderling* does not teach or suggest "transmitting a script for storing the specific program" and "transmitting a script for executing the specific program." The Office Action cites to Column 6 lines 40-44, Column 7, lines 29-37 and 65-67, and Column 10, lines 57-62 for the features of the present invention. Although *Elderling* teaches that advertising can be received at times not corresponding to presentation times, *Elderling* does not teach that the advertisement should be stored and executed due from the reception of scripts which store and execute the specific program. (Col. 7, lns. 27 – 39). The Office Action is maintaining that the program map tables ("PMTs") are scripts. However, *Elderling* recites that:

> [A] receiver program selector receives the distribution data stream and uses a program map embedded therein to direct program and auxiliary data multiplexers (MUXes) to extract a selected primary program and selected portions of the auxiliary data stream, respectively.

(Col. 10, lns. 57 – 62). Thus, *Elderling* discloses that the receiver program selector receives the distribution data stream and uses a program map embedded therein. It receives and uses those two objects to direct MUXes to extract a selected primary program. That is, the receiver program uses the PMT to direct MUXes to extract a selected primary program, but the PMT does not itself contain instructions to store or execute the programs.

Our recent discussion with Pinchus Laufer in the Office of Patent Legal Administration, who was involved in writing the Examination Guidelines for Determining Obviousness under 35

USC §103 in view of the Supreme Court decision in *KSR International Co. vs. Teleflex, Inc.* verified that the KSR decision still required a specific rationale that could not be based on hindsight for purportedly combining the elements in the prior art to meet an invention defined in the patent claims.

Mr. Laufer incorporated the following from the existing MPEP into the Guidelines.

As noted in the MPEP at §2143.02:

> A rationale to support a conclusion that a claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods <u>with no change in their respective functions</u>, and <u>the combination would have yielded nothing more than predictable results</u> to one of ordinary skill in the art. *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1395 (2007); *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282, 189 USPQ 449, 453 (1976); *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 62-63, 163 USPQ 673, 675 (1969); *Great Atlantic & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 152, 87 USPQ 303, 306 (1950). (underline added)

As seen in the ISO/IEC 13818-1 Section 2.4.4 previously submitted, the PMT is a table for associating a packet ID ("PID") with a program, and obtaining a PID of a packet comprising the specified primary program and the auxiliary data. This is done by referring to the PMT included in the distribution data stream. That is, the PMT is used to determine which PID to use in order to "to extract a selected primary program and selected portions of the auxiliary data stream, respectively." Thus, the PMT is akin to a table of contents specifying where to find the primary program and other selected portions. However, a table of contents merely indicates the location of an object and not what should be done with the object. In *Elderling*, a different unit, the video augmentation unit "inserts the selected auxiliary data into the primary program stream to create an augmented primary program which is supplied for decoding and viewing." Thus, the PMT does not insert the selected auxiliary data into the primary program stream.

This is further supported by the teaching in *Elderling* that it utilizes an MPEG-2 system which is a standard for digital broadcasting. The MPEG-2 system is for multiplexing and transmitting MPEG-2 and is standardized in ISO/IEC 1318-1 and ITU-T H.222.0. One of the formats of the MPEG-2 system is the MPEG-2 Transport Stream (MPEG-2 TS). Because a plurality of programs are multiplexed in the MPEG-2 TS, information indicating a selected program out of the plurality of programs, program specific information, is inserted in the MPEG-2 TS as a MPEG-2 TS packet having a PID different from moving image data and audio data. In *Elderling*, the PMT is the program specific information which stores each PID of an image and audio included in a specific program. The PMT included in the MPEG-2 TS is extracted in a procedure determined by the MPEG-2 Standard and a package of image data or audio data having a PID stored in the table is extracted from the MPEG-2 TS to reproduce a specific program. Thus, the PMT itself does not perform an operation of storing and reproducing programs nor does it provide the specific instructions to do or that such operations should occur either.

As noted on Page 17, Line 15 through Page 19, Line 13 in our specification, the script (message) is included in a data module with ID=0 in each content, and is depicted in Figure 5 as messages M1-M5. Thus in contrast to *Elderling*, in the present invention, data module preparation unit 104 can embed a message such as message M2 which designates to the receiver module that the receiver should cache and reproduce certain specific data modules. (Pg. 18, lns. 19 - 26). Thus, in the present invention, scripts indicate which operation should occur such as reproduction of contents or caching of contents.

Furthermore, a conventional digital broadcast system using the MPEG-2 system would not rely upon a separate instruction transmitted from the transmitter in order to determine when to cache a program. Instead, in the conventional digital broadcast system based on the MPEG-2

System, the control of the cache is performed based on a protocol by an existing communication standard that has been installed in the receiver. That is, the receiver has internal protocols based on the MPEG-2 standard to determine when to cache a program as opposed to receiving an external instruction to determine when to cache a program. There is also no indication in *Swix* that it cures the deficiencies of *Elderling*.

The Office Action admits that *Elderling* does not teach or suggest "repeatedly transmitting in a carousel format the specific program during the first time slot" and "repeatedly transmitting in a carousel format the specific program during the second time slot."

However, *Swix* also does not disclose "repeatedly transmitting in a carousel format the specific program during the first time slot" and "repeatedly transmitting in a carousel format the specific program during the second time slot."

Swix is a method and system for providing targeted advertisements for networked media delivery systems. It accomplishes this by tracking viewer watching habits and then delivering different customized advertising based on the viewer watching habits. (Abstract)

The Office Action cites to Column 9, lines 32 to 44 in *Swix* for the features of the present invention. However, *Swix* only teaches that based on the assigned demographic group, the set-top box retrieves the corresponding target advertisements. For bit map advertisements, the set-top box could tune to advertisements spooled in a broadcast carousel format. (Col. 9, lns. 32 – 43). Note, that *Swix* utilizes the term "advertisements" in a plural manner instead of singular manner. Thus, a variety of advertisements, are repeatedly broadcasted in order. For example, if there are three advertisements, A, B, and C, they are repeatedly broadcast as A, B, C, A, B, C, A, B, C, etc. For a specific time slot they could be broadcast as A, B, and C. In such a broadcast format multiple advertisements are broadcast in order instead of a specific program during a

certain time slot. That is, *Swix* does not teach transmitting a specific program A, repeatedly such as A, A, A, in a first time slot.

In contrast, the present invention even if there is only one advertisement, it is repeatedly transmitted in a time period preceding the reproduction time. This advantageously allows the data of the specific program to be stored in the receiver by the production starting time of the specific program. Furthermore, for viewers who start viewing the specific program in the middle of the reproduction time period of the specific program, the specific program is transmitted more than once during the reproduction time period.

The Office Action rejected Claims 1, 2, 4, 9, 11, 12, 14-23, and 29 under 35 U.S.C. § 103(a) as being unpatentable over *Elderling* in view of *Suzuki* (U.S. 6,401,243), *Swix*, and *Allibhoy* (U.S. 5,818,440).

With respect to Claim 1, all arguments for patentability with respect to Claim 24 are repeated and incorporated herein.

Furthermore, the Office Action admits that *Elderling* does not teach or suggest "script generation unit operable to generate . . . (b) when the receiving apparatus receives an event message for instructing reproduction, a script for the receiving apparatus to reproduce the program data of the specific program in a case where the program data of the specific program has been stored in the storage unit, each script being automatically stored when the receiving apparatus receives the script."

However, *Suzuki* also does not remedy the deficiencies of *Elderling*. *Suzuki* teaches that "upon receiving the reproduction instruction, the temporary memory device reads the corresponding digital video data of the program and supplies it to the digital television decoding circuit 319 through the switch circuit 318." (Pg. 23, lns. 21 – 30). However, if the reproduction instruction is the event message, then there is no teaching within *Suzuki* that the temporary

memory device generates a script to reproduce the program data. That is, the temporary memory device receives the reproduction instruction and acts on the instruction to read the corresponding digital video data of the program as opposed to generating a script which causes the receiving apparatus to reproduce the program. However, if the reproduction instruction is considered the script, then there is no teaching of an event message that is received by the receiving apparatus. In *Suzuki*, the reproduction instruction is generated by the cable television station after a reproduction request is submitted by the user. (Pg. 22, lns. 44-51, Pg. 23, lns. 4 – 30). That is, the user submits a request but no such instructions are issued to the receiver. The submission of a request is not the same as an instruction since a request asks for permission, but an instruction is a command. Thus the act of the user inputting a reproduction request via the user interface 321 is not the same as the receiver receiving a reproduction instruction.

Furthermore, even if the act of inputting a reproduction request is considered to be the same as a reproduction instruction, and there is no indication that it should be considered the same, the reproduction request is not transmitted from the transmitting device in *Suzuki*. The reproduction request is transmitted from the user. There is also no indication that *Swix* or *Allibhoy* remedy the deficiencies of *Elderling* and *Suzuki*.

In contrast, in the present invention, the event message is from "an event message generation unit operable to generate the event message for instructing storage and the event message for instructing reproduction."

The Office Action also admits that neither *Elderling* nor *Suzuki* disclose "each script being automatically stored when the receiving apparatus receives the script."

However, *Allibhoy* also does not remedy the deficiencies of *Elderling* or *Suzuki*. Allibhoy teaches a detect token module 110 which waits and looks for a token in the video stream. The tokens are flags which indicate various states of the video stream. For example, a

warning token is a flag to indicate that an execute token will be shortly received. (Col. 5, ln. 67 – Col. 6, ln. 2). The Office Action appears to claim that the tokens are scripts and that they are each processed by the receiver through the detect token module 110. However, there is no indication that the tokens are scripts as tokens are merely flags. They do not necessarily indicate what the apparatus in *Allibhoy* should do. For example, the warning flag does not command the apparatus in *Allibhoy* to perform a function. Instead, the flag is analyzed by the decision operation 112 which then determines what operations should occur. For example, if the token is a warning flag, then operation 114 sends a warning message to the set top computer system to initialize itself. The warning flag, however, does not tell operation 114 to send such warning messages nor provide such commands to do so.

With respect to Claim 29, Applicant has amended the claim to recite "transmission unit operable to . . . repeatedly transmit, as an event message independent of the specific program, each script generated by the script generation unit" which addresses the concerns of the Office Action on Page 2.

As previously noted, instead of being multiplexed onto contents as a content of the data module, the "scripts" are repeatedly transmitted as event messages, independently of the contents. Thus, since there are no messages depending on another program in the data module, it is possible to realize an effect that permits reuse of the data module, e.g., rebroadcasting of the program becomes facilitated. (Pg. 37, lns. 12 - 26).

All arguments with respect to Claims 1 and 24 are repeated and incorporated herein for Claims 9, 12, 15 – 23 and 29.
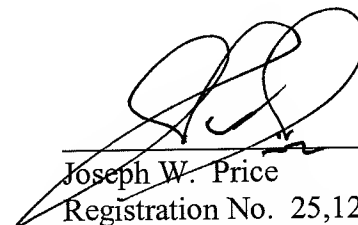
Furthermore, dependent Claims 4, 11, and 14, depend from and further define independent Claims 1, 9, and 12, and are thus allowable, too.

Applicant believes that the case is now in condition for allowance and an early notification of the same is requested.

If the Examiner believes a telephone interview will help further the prosecution of this case, the undersigned attorney can be contacted at the listed telephone number.

Very truly yours,

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